Amendments to and Listing of the Claims

1. (Currently Amended) A method for sterilizing industrial products comprising, in combination, the steps of conditioning an industrial product to be sterilized by placing the product in a single chamber, first evacuating said single chamber to a pressure of from 1 to 4 inches of mercury, adding pulsing steam and heated inert gas into said single chamber to increase the chamber pressure by at least 2 inches of mercury and re-evacuating said single chamber by pulling said inert gas from said chamber by 2 inches of mercury to or near to the value of the first evacuating pressure, and sterilizing said product by injecting a sterilent gas into said single chamber to raise said chamber pressure by at least 9 inches of mercury with from 150 to 550 mg/l of sterilent gas;

introducing an overpressure of inert gas into said single chamber in the range of from 5 to 15 inches of mercury;

holding the product in said single chamber for a dwell time determined for the product being sterilized until the product is sterilized;

~~at initiation of dwell time, adding an inert gas overlay of an inert gas blanket overpressure for duration of said dwell time in the range of from 5 to 15 inches of mercury;~~

degassing the product ~~by a gas wash~~, wherein ~~comprising~~ an inert gas ~~and/or steam and by evacuating~~ is used to evacuate said chamber to a pressure of less than 3 inches of mercury and re-pressurized with the inert gas to a pressure of from less than 3 to up to 55 inches of mercury with necessary repetitions of evacuating and re-pressuring said chamber to degas the product, wherein the inert gas facilitates the steam and sterilant gas entering into crevices of the product, wherein the steam and the sterilant gas combine, without condensing, the combined steam and

sterilant gas together removed from the product by the repetitions of evacuating and re-pressuring said chamber with the inert gas;

releasing said degassed product after the steps of conditioning the product, sterilizing said product, and de-gassing said product are completed to validated process parameters which render to said product specific product and process evidence of appropriate level of lethality and residual reduction.

2. (Canceled)

3. (Previously presented) The method for sterilizing industrial products of claim 1 further comprising the step of evacuating said single chamber after holding the product in said single chamber and pulsing in steam and/or heated inert gas into said single chamber.

4. (Original) The method for sterilizing industrial products of claim 3 wherein the heated insert gas is Nitrogen and wherein the sterilent gas is ethylene oxide.

5. (Previously presented) The method for sterilizing industrial products of claim 4 wherein the evacuating of said chamber results in the pressure in the range of 1 to 3 inches of mercury, said evacuation of said chamber includes the step of real-time monitoring said concentration of ethylene oxide gas in the headspace.

6. (Currently Amended) The method for sterilizing industrial products of claim 3 wherein the step of degassing the product is accomplished by evacuating said single chamber, pressurizing said single chamber with 3 to [[50]] 55 inches of mercury with an inert gas, and repeating until the product is degassed.

7. (Previously presented) The method for sterilizing industrial products of claim 3 wherein the step of degassing the product is accomplished by evacuating said single

chamber down to 3 to 7 inches of mercury and pulsing said single chamber with 5 to 9 inches of heated inert gas.

8. (Currently Amended) The method for sterilizing industrial products of ~~claims 6 or 7~~ claim 6 wherein the step of degassing the product is further accomplished by injecting said single chamber with warm air.

9. (Canceled).

10. (Currently Amended) The method for sterilizing industrial products of claim 5 wherein the step of degassing the product is accomplished by evacuating said single chamber, pressurizing said single chamber with 3 to [[50]] 55 inches of mercury with Nitrogen, and repeating until the product is degassed.

11. (Previously presented) The method for sterilizing industrial products of claim 5 wherein the step of degassing the product is accomplished by evacuating said single chamber down to 3 to 7 inches of mercury and pulsing said single chamber with 5 to 9 inches of heated Nitrogen.

12. (Currently Amended) The method for sterilizing industrial products of ~~claims 10 or 11~~ claim 10 wherein the step of degassing the product is further accomplished by injecting said single chamber with warm air.

13. (Previously presented) The method of claim 6 wherein evacuating said single chamber as a part of degassing the product is performed at a rate in the range of 0.1 to 0.5 inches per minute.

14. (Currently Amended) A method for sterilizing industrial products comprising, in combination, the steps of:

conditioning an industrial product to be sterilized by placing the product in a single chamber, evacuating said single chamber, pulsing ~~steam and/or~~ heated inert gas into said single chamber[[,]] to raise the temperature of the product and/or pulsing steam into said single chamber to raise the temperature and/or to introduce humidity into said chamber to facilitate said sterilization reaction;

sterilizing said industrial product by injecting ethylene oxide gas into said single chamber;

introducing 5 to 15 inches of mercury of Nitrogen overpressure into said single chamber;

holding the product in said single chamber while the product is sterilized;

evacuating said single chamber to a pressure of 1 to 3 inches of mercury;

pulsing in ~~stream~~ steam and/or heated Nitrogen of 130° to 170° into said single chamber, and injecting said single chamber with warm air;

degassing the product after evacuating said chamber using an inert gas~~by a gas wash comprising injection of steam~~ with a number of repeats without specified hold time;

releasing the degassed product after steps of conditioning the product, sterilizing the product, and degassing the product to specific product parameters;

15. (Previously presented) The method of claim 14 wherein evacuating said single chamber to a pressure of 1 to 3 inches of mercury is done at a rate of 0.1 to 0.5 inches per minute.

16. (Previously presented) The method for sterilizing industrial products of claim 15 wherein the step of pulsing in steam and/or heated Nitrogen into said single chamber is repeated one or more times.